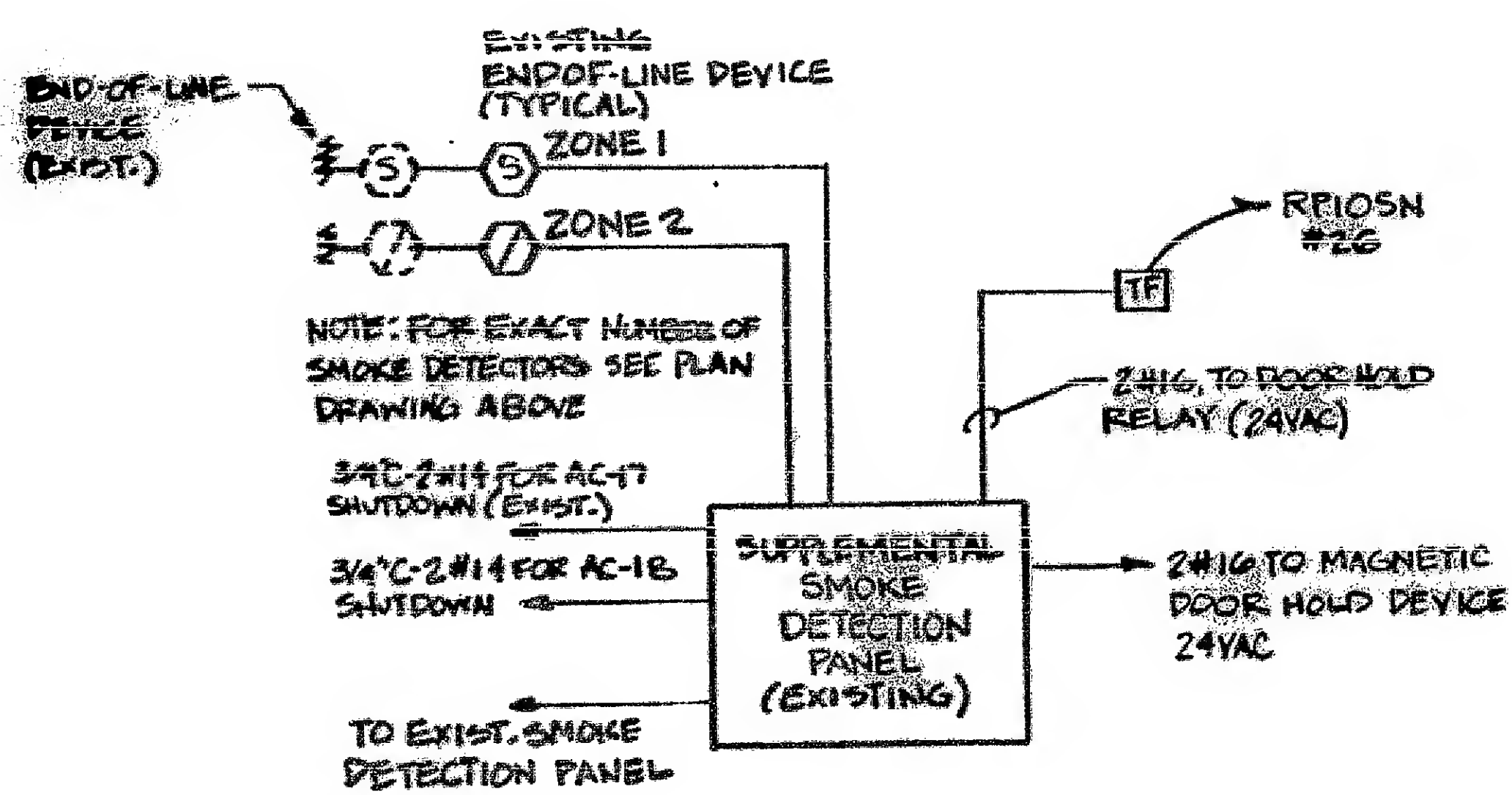


SMOKE DETECTION PLAN

1/8" = 1' 0"



SMOKE DETECTION WIRING DIAGRAM

SMOKE DETECTION SPECIFICATIONS

PART 1 - GENERAL

1.01 GENERAL DESCRIPTION

- Furnish and install a detection system and all associated equipment required for proper operation as specified herein and as shown on the Contract Drawings.
- All equipment shall be accompanied by complete service notes of the manufacturer and drawings detailing all interconnections.
- The system shall conform to the requirements of the Fire Department of the City of N.Y. Fire Prevention Directive 3-74.
- Equipment furnished hereunder shall conform in concept to the details shown on the Contract Drawings and be as described in the Specifications and required for the intended operation.
- All wiring shall be as shown on the Contract Drawings, and as required for proper operation and interconnection of all equipment.
- All wires and cables and equipment shall be approved by the Board of Standards and Appeals of New York City.
- Additional or larger wire, conduits, terminal boxes, and all other equipment over and above those shown on the Contract Drawings, shall be furnished without extra charge if required for the proper operation of the system.

1.02 MATERIALS

- The manufacturer shall submit for approval shop drawings, wiring diagrams, and catalog cuts, including an overall block diagram of the smoke detection system, listing the number and type of components to be furnished, and a complete listing of information for item or component listed. Submittal shall demonstrate compliance with all requirements of the Specifications and Contract Drawings.

1.03 OPERATION AND MAINTENANCE MANUALS

- Furnish to the Engineer, two and indexed copies of an approved operations and instruction manual for the "Smoke Detection" system.
- The manual shall provide complete instructions on the proper operation and use, lubrication and periodic maintenance, trouble shooting, together with the source of replacement parts and service for the item of equipment or the system covered.

1.04 SYSTEM OPERATION

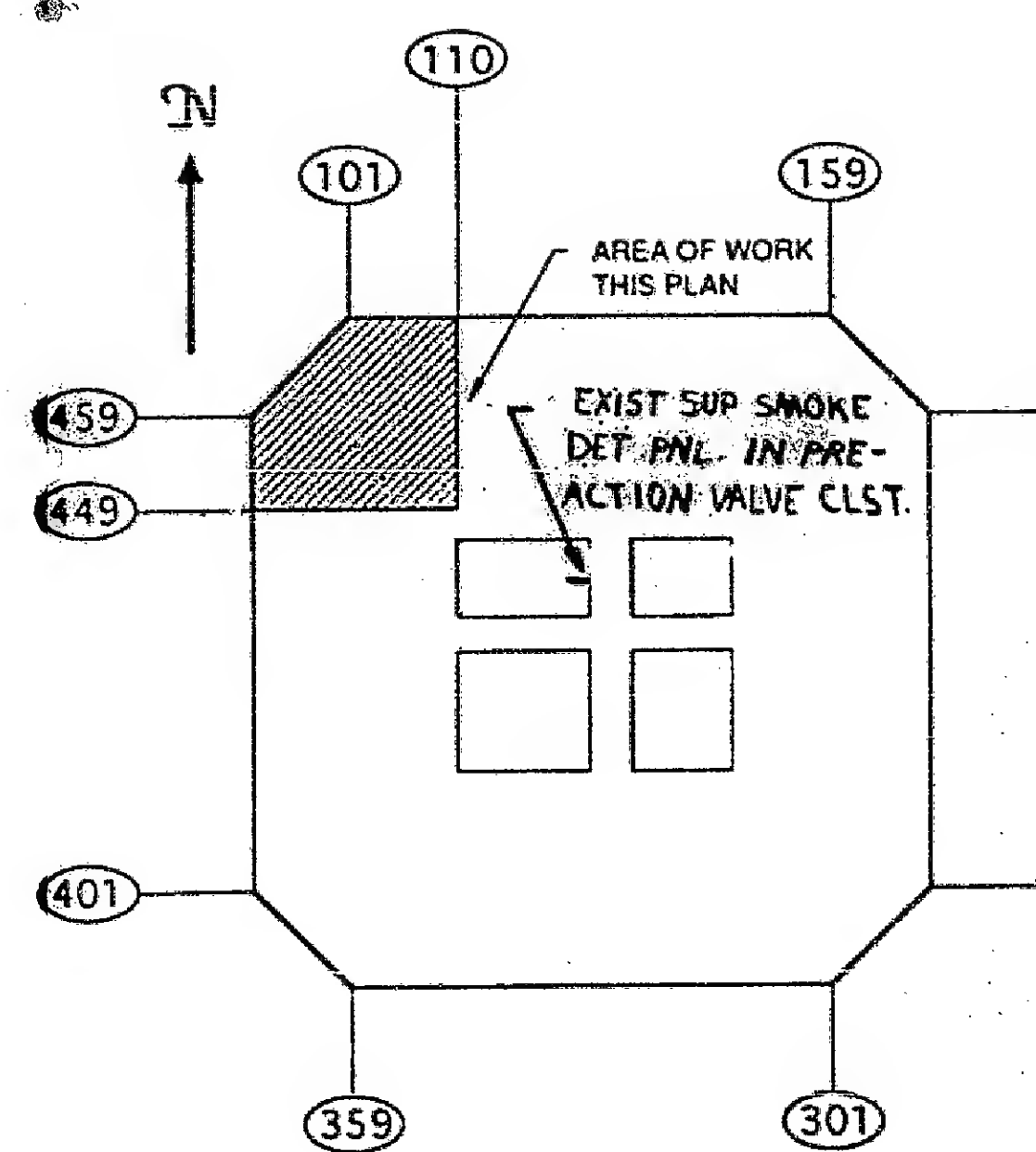
- The circuits shall be arranged so that grounds, opens, or shorts, etc., in any wiring of the system will cause a visual trouble indication at the control cabinet and a trouble bell to operate.
- The system shall operate as follows for each protected area:
 - Smoke Detection - When one detector is activated the following shall occur:
 - The alarm and zone indication lights shall operate at the smoke detection control panel.
 - The area alarm bell shall sound, and visual indicator will go on inside the protected area.
 - The associated room fans and air conditioning unit shall shutdown and dampers shall operate.
 - An alarm and trouble signal shall be provided to the WTC police desk via nearest existing RMT Cabinet.

PART 2 - PRODUCTS

2.01 SMOKE DETECTION SYSTEM

- The smoke detection system shall be "System 3" manufactured by Pyrotechnics. No substitutions will be allowed for the Pyrotechnics equipment specified herein.
- Smoke Detection Control Panel. The control panel shall be model CP-35 and provide the following items and functions:
 - Provide necessary power for operation of smoke detector circuits and all required equipment.
 - Sound a local alarm bell, trouble bell and strobe lights.
 - Supervise the detector circuits and all required relay coils.
 - Trouble indicator lamp.
 - Separate indicator lamps for the following:
 - Smoke detection - one lamp per zone.
 - One set of alarm and one set of trouble operated single-pole, double-throw, normally closed relay contacts.
 - Silencing and reset switches.
 - All necessary relays and other equipment required for operation as described herein and shown on Contract Drawings.
 - Power supply module PS-35 rated @ 10 Amps.

- Smoke Detection System. Smoke detection of combustion chambers, or parts thereof, shall be Model D1-6 Zone Model.
- All required smoke detectors shall be installed in the panel enclosure. The panel enclosure shall be provided with a minimum of 1/2 inch of clearance to the enclosure.
- The visual alarm shall be Model 515/7.
- 2.02 WIRING. All wiring and cable shall be marked "Fire Class 'E' Fire Resistant" and shall be installed in the Manual.
- Strobe wiring shall be BSA approved.
- 2.03 NAMEPLATES. All nameplates shall be Zone identification. The tests shall be to the Engineer's recommendation.
- 2.04 FIELD TESTS. After installation with all devices, the tests shall be to the Engineer's recommendation.



KEY PLAN #1-WTC-105
NOT TO SCALE